

**REMARKS**

Applicants thank the Examiner for the thorough consideration given the presently pending claims. Claims 1-6 are pending in this application. By this response, claims 1 and 4 are amended and claims 5 and 6 are added. Claims 1 and 5 are independent claims.

**Drawing Objections**

The drawings are objected to as improper for not being labeled in English. Applicants hereby submit replacement drawings labeled in English. Accordingly, reconsideration and withdrawal of this objection is respectfully requested.

**Claim Rejections – Section 102(b)**

Claims 1 – 3 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 6,351,504 to Igarashi (“Igarashi”). Insofar as it pertains to the presently pending claims, this rejection is respectfully traversed.

**Claim 1**

Independent claim 1 pertains to a microwave frequency converter that includes, in pertinent part, “an RF amplifier whose gain is adjustable to any value within a range from an amplified state to an attenuated state; and a control circuit that applies a gain control voltage to the RF amplifier ... wherein the RF amplifier does not perform attenuation when its gain value is associated with an amplified state.”

*Igarashi’s Attenuator Is Not Part of the Amplifier*

Igarashi teaches a frequency converter that includes an attenuator (Fig. 4, element 31) and an automatic gain high-frequency amplifier (Fig. 4, element 32). While Igarashi’s amplifier receives a control voltage from a control voltage generator (Fig. 4, element 40), the attenuator does not. The amplifier (Fig. 4, element 32) may therefore be seen as analogous to the “RF amplifier” of independent claim 1 whereas the attenuator (Fig. 4, element 31), because it does not receive a control voltage signal, cannot properly be interpreted or construed as analogous to

the “RF amplifier” of independent claim 1. Furthermore, Igarashi’s amplifier does not perform attenuation, the attenuator does. Igarashi’s attenuator always performs attenuation, regardless of the amplification state of the amplifier. An interpretation of an RF amplifier that includes both Igarashi’s amplifier and Igarashi’s attenuator would therefore always perform signal attenuation prior to performing signal amplification. Such an interpretation is clearly inconsistent with an RF amplifier that “does not perform attenuation when its gain value is associated with an amplified state” as required by independent claim 1.

*Igarashi’s Amplifier Does Not Perform Signal Attenuation*

Igarashi’s attenuator performs signal attenuation only whereas Igarashi’s amplifier performs signal amplification only. Igarashi’s amplifier therefore does not have a gain “adjustable to any value within a range from an amplified state to an attenuated state” because it performs only signal amplification, not signal attenuation. Any amplifier gain adjustment capabilities taught or suggested in Igarashi are directed purely towards signal amplification and not towards signal attenuation. There is no teaching or suggestion in Igarashi that any of the amplifiers disclosed therein may be adjusted to have a gain associated with an attenuated state.

*Summary*

Applicants therefore respectfully submit that because Igarashi’s attenuator (Fig. 4, element 31) may not be properly construed as part of Igarashi’s amplifier (Fig. 4, element 32), and because Igarashi’s amplifier is not taught as having signal attenuation capability, Igarashi fails to teach or suggest “an RF amplifier whose gain is adjustable to any value within a range from an amplified state to an attenuated state; and a control circuit that applies a gain control voltage to the RF amplifier ... wherein the RF amplifier does not perform attenuation when its gain value is associated with an amplified state.” as required by independent claim 1.

*Claims 2 and 3*

Applicants respectfully submit that claims 2 and 3 are allowable at least by virtue of their dependency from independent claim 1.

### **Conclusion**

At least in view of the above, Applicants respectfully submit that Igarashi fails to teach each and every aspect of the claimed invention. Specifically, Igarashi fails to teach or suggest “an RF amplifier whose gain is adjustable to any value within a range from an amplified state to an attenuated state; and a control circuit that applies a gain control voltage to the RF amplifier ... wherein the RF amplifier does not perform attenuation when its gain value is associated with an amplified state” as required by independent claim 1 and all claims depending therefrom. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

### **Claim Rejections – Section 103(a)**

Claim 4 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Igarashi in view of U.S. Patent 5,554,954 to Takahashi (“Takahashi”). Insofar as it pertains to the presently pending claims, this rejection is respectfully traversed.

Applicants respectfully submit that claim 4 is allowable at least by virtue of its dependency from independent claim 1. Takahashi is not relied upon, nor may it properly be relied upon to remedy the deficiencies of Igarashi with respect to independent claim 1 or any claims depending therefrom. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

### **New Claims**

Applicants respectfully submit that claims 5 and 6 are allowable at least for the same reasons as set forth with respect to independent claim 1.

### **Conclusion**

Entry of the above amendments is earnestly solicited. Applicants respectfully submit that the above-presented arguments and amendments place the currently pending claims in condition for allowance. A notice of allowance is therefore respectfully solicited for all currently pending claims.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Michael K. Mutter (Reg. No. 29,680 ) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

By \_\_\_\_\_  
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